

IN THE CLAIMS:

Please amend the claims of this application so as to read as follows:

1-27. (Canceled, without prejudice)

28. (Currently Amended) A data storage medium for use with a display device,
said data storage medium having recorded thereon a plurality of
pre-specified data units that together define a single complete
document,

wherein

each pre-specified data unit includes (i) a series of
display elements for display by the display device,
and (ii) management elements associated with said
display elements, said management elements
including all information necessary for the display
device to display a predetermined sequence of said
display elements as a scroll display, and

wherein

said predetermined sequence of said display elements includes an interval or intervals that sequentially together form a scroll path, each said interval being specified by a line segment defined by coordinate values of a line segment starting point and ~~an~~ a line segment end point in a coordinate system defined by said pre-specified unit corresponding to coordinate values assigned to the display elements in said prespecified unit, such that the display elements of each successive interval ~~forming the intervals~~ defining said scroll path are respectively sequentially displayed from said line segment starting point to said line segment end point thereof as said scroll path is displayed by said display device.

29. Canceled, without prejudice.

30. Canceled, without prejudice.

31. (Currently Amended) A data storage medium as defined in claim 28, characterized in that said predetermined sequence of display elements also includes linking means for causing said display device to link ~~an~~ a line segment end point of a first scroll display path with a line segment starting point of another scroll display path.
32. (Previously Presented) A data storage medium as defined in Claim 28, characterized in that said management elements include elements for controlling a scroll display speed.
33. (Previously Presented) A data storage medium as defined in claim 28, characterized in that the management elements include management elements associated with selected areas of said coordinate system defined by said pre-specified unit associated with said selected ones or said contiguous groupings of said display elements for scroll display.
34. (Previously Presented) A data storage medium as defined in claim 28, characterized in that the management elements include management elements specifying a scale of enlargement or reduction of said display elements or contiguous groupings of display elements located along a scroll path for scroll display.

35. (Previously Presented) A data storage medium according to Claim 28 wherein the management elements in each pre-specified data unit include display information and scroll display information, and wherein the scroll display information includes synchronous reproduction information for specifying non-motionless display elements to be reproduced in synchronism with a scroll display of other display elements.
36. (Previously Presented) A display device for displaying display elements stored on a data storage medium as defined in any one of claims 28, 31, 32, 33, 34 or 35, comprising a display controller for performing a scroll display of said predetermined sequence of said display elements.
37. (Previously Presented) A display device as defined in claim 36, further comprising a scroll indicating means for scroll display , and wherein said scroll display is conducted only while a user instructs said display controller to perform scroll display in either forward or backward directions along a scroll path.

38. (Currently Amended) A data storage medium for use with a display device, said data storage medium having display data associated with a single complete document recorded thereon, said display data including a plurality of image data objects for display on a display screen of said display device and all management information associated with each of said image data objects required by said display device for the scroll display, thereof, comprising:

a computer readable medium on which said display data is recorded in the form of distinct files, each said distinct file containing a pre-selected portion of said display data including at least one of said plurality of image data objects along with all of the respective associated management information required by said display device for the scroll display, thereof, wherein said management information includes scroll path information including an ~~and~~ interval or intervals that together form a scroll path, each said interval being specified by a line segment defined by coordinate values of a line segment starting point and ~~an~~ a line segment end point in a coordinate system defined by said distinct file corresponding to coordinate values assigned to said image data objects in said distinct file,

such that the image data objects forming respective
~~the~~ intervals defining said scroll path are respectively
~~respectively~~ sequentially displayed from said line
segment starting point to said line segment end point
thereof as said scroll path is displayed by said
display device.

39. Canceled, without prejudice.

40. Canceled, without prejudice.

41. (Previously Presented) A data storage medium
as defined in claim 38, characterized in that the management
information associated with the image data objects contained in
each one of said distinct files includes information for linking a
scroll display of selected ones or contiguous groups of image data
objects contained in that file with selected ones or contiguous
groups of image data objects located on a scroll path contained in
at least another one of said distinct files.

42. (Previously Presented) A data storage medium
as defined in claim 38, characterized in that the management
information associated with the image data objects or contiguous groups
of image data objects in each said distinct file required for the scroll
display of said image data objects or contiguous groups of said image
data objects includes scroll display speed information.

43. (Previously Presented) A data storage medium as defined in claim 38, characterized in that the management information required by said display device for the scroll display of said image data objects or contiguous groups of said image data objects includes information specifying a scroll display area on a display screen of said display device within which said scroll display of said image data objects or said contiguous groups of said image data objects is to occur.

44. (Previously Presented) A data storage medium as defined in claim 38, characterized in that the management information required by said display device for the scroll display of said image data objects or said contiguous groups of said image data objects includes information specifying a scale of enlargement or reduction of a display area for scroll display on a display screen of said display device within which said scroll display is to occur.

45. (Previously Presented) A data storage medium as defined in claim 38, characterized in that said management information required for scroll display by said display device associated with said image data objects or contiguous groups of said image data objects includes synchronous reproduction information for specifying other image data objects to be displayed in synchronism with the scroll display of each said image data object or contiguous groups of image data objects.

46. (Previously Presented) A display device for displaying
image data objects or contiguous groups of image data objects
contained in at least one distinct file recorded on a data storage
medium as defined any one of claims 38, 41, 42, 43, 44 or 45,
comprising a display controller performing scroll display of said
image data objects or contiguous groups of said image data
objects located on a scroll path based on management information
associated with those image data objects or contiguous groups of
said image data objects required by said display device for the
scroll display thereof.
47. (Previously Presented) A display device as defined in claim 46, further
comprising a scroll indicating means for monitoring the scroll
display of said image data objects or contiguous groups of
said image data objects on a display screen of said display
device, wherein said scroll display is conducted based on
the management information only while a user instructs
said display controller to perform said scroll display in
either forward or backward directions along a selected
scroll path.
48. (Cancelled, without prejudice)
49. (Cancelled, without prejudice)

50. (Currently Amended) A data storage medium

according to claim 28, wherein vectors connect the intervals that together define ~~of~~ said scroll path; and wherein said display device conducts a sequential display of said predetermined sequence of display elements along each of the ~~sequence of~~ the sequential intervals in said scroll path as determined by said vectors.

51. (Cancelled, without prejudice)

52. (Cancelled, without prejudice)

53. (Currently Amended) A data storage medium

according to claim 38, wherein vectors connect the intervals of said scroll path, and wherein said display device conducts a sequential display of said image data objects or contiguous groups of image data objects along each of the ~~sequence of~~ sequential intervals in said scroll path as determined by said vectors.

54. (Previously Presented) A data storage medium

as defined in claim 28, characterized in that the scroll display control information includes a scale of enlargement or reduction of a display area for scroll display on a screen of said display device.

55. (Previously Presented) A data storage medium
as defined in claim 38, characterized in that the management
information required by said display device for the scroll display of
said image data objects or contiguous groups of image data
objects includes a scale of enlargement or reduction of a display
area for scroll display on a screen of said display device.